Remarks

Upon entry of the foregoing amendment, claims 1-38 are pending in the application, with claims 1, 19, 20, and 26 being the independent claims. Claims 1, 19, 20, and 26 are sought to be amended. New claims 34-38 are sought to be added.

These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 26-27

Claims 26-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,490,727 ("Nazarathy") in view of U.S. Patent Application No. 2002/0131413 ("Tsao"). Applicants respectfully traverse.

The Examiner contends that the combination of Nazarathy and Tsao teaches each of the elements of independent claim 26, Applicants respectfully disagree. Claim 26, as amended, recites a system for determining a priority classification of a burst at a ***physical interface*** of a communications device, comprising:

> *a burst receiver for receiving the burst at the* ***physical interface****; and*
>
> *a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator and* ***wherein said detecting occurs at the physical interface prior to data link layer protocol processing.***

Applicants maintain that the combination of Nazarathy and Tsao does not teach or suggest each and every feature of claim 26, as amended. For example, the combination of Nazarathy and Tsao does not teach or suggest "*a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator and wherein said detecting occurs at the physical interface prior to data link layer protocol processing,*" as recited in claim 26.

The Examiner, on page 4 of the Office Action, acknowledges that Nazarathy does not teach or suggest the "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator" feature of claim 26. The Examiner relies upon Tsao to allegedly show this feature. Applicants respectfully disagree.

Claim 26, as amended, recites a classifier for detecting an identifier wherein the detecting occurs at the physical interface prior to data link layer protocol processing. In contrast, the teaching of Tsao is directed to layers above the physical interface and the data link layer. Paragraph [0053] of Tsao states:

> Classifier sub-module 114 may classify the packet based upon: a source address, a destination address, or other information such as a service class (e.g., constant bit rate), transport control protocol port, etc. Other information may also be used by the classifier sub-module 114 to classify the packet. (*emphasis added*)

The terms listed above refer to fields defined in known communications protocols. The known communication protocols that define the fields are used in layers above the physical interface and data link layer. As is known in the art, the first three layers of the OSI model include (1) Physical Layer, (2) Data Link Layer,

and the (3) Network Layer. Further, in the OSI model, the layers are distinguished by the type of processing that occurs on an incoming data stream where processing at a lower layer occurs before processing at a next layer occurs. Thus, in contrast to claim 26 which is directed to a classifier in the physical interface prior to data link layer protocol processing, Tsao does not disclose that packets are classified by classifier sub-module 114 at the physical layer. Further, Tsao describes that packet arrival module 106 places a packet in one of queues 112_1 -112_n and classifier sub-module 114 retrieves the same packet (i.e. packets at the same layer) from one of queues 112_1-112_n (See Fig. 2, Paragraphs [0026], [0029], [0051]-[0053]). Thus, Tsao does not disclose classifying packets at the physical interface and prior to data link layer protocol processing. The classifier in Tsao is similar to prior art classifiers described in the Background section of the Specification in that it does not classify packets at the physical interface and prior to data link layer protocol processing.

For example, the above-described feature can be done for the reasons as discussed in paragraphs 0005 and 0006 of the instant specification:

> Accordingly when a signal is received at the physical interface of a headend device, the signal is delivered to the data line layer for further processing. All signals are treated alike at the physical interface, without regard to priority or other quality of service parameters. As a result, signals are forwarded to the data link layer on a first-come-first-served basis. Some of these signals may contain a higher priority packet (such as voice) requiring expedited handling to ensure good application performance. Others may contain lower priority packet from a service that is more tolerant of delays while still providing acceptable performance standards.
>
> Upon receipt of the signal by the data link layer, application software classifies the signal into two or more

> levels of priority but only after protocol processing has been completed. As a result, a signal containing a lower priority signal could be forwarded to the data link layer for protocol processing before a signal from a higher priority service. The delay resulting from forwarding a lower priority signal to the application software before forwarding a higher priority signal could be harmful to performance of the associated higher priority service. For instance, this conventional method can introduce approximately fifty to hundred milliseconds of delay. Although it may be tolerated by data services, this amount of delay can be problematic to voice scheduling.

Neither Tsao nor Nazarathy disclose "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator and wherein said detecting occurs at the physical interface prior to data link layer protocol processing" as recited in claim 26. Therefore, claim 26 is patentable over the combination.

Moreover, it would not have been obvious to one of ordinary skill in the art to use the teachings of Tsao to modify Nazarathy to achieve the essential features of claim 26. One of the purposes of the system disclosed in the Nazarathy Patent is to create a system that can function with many cable modem standards (See Col. 11, Lines 9-12). The system in Nazarathy does this by "'elongating the wire' from the burst receiver to the MAC layer." (See Col. 10, Lines 42-47). As noted in Nazarathy this "elongation" actually creates additional delays in burst transmissions, which is viewed as inconsequential in view of the benefits of the system (See Col. 20, Lines 9-24). Thus, Nazarathy actually teaches away from reducing delays at the physical layer. Because Nazarathy teaches away from reducing delays at the physical layer,

one of ordinary skill in the art would not have modified the system in Nazarathy with the upper layer classifier in Tsao.

For at least the reasons set forth above, Applicants submit that independent claim 26 is patentable over the combination of Nazarathy and Tsao.

Furthermore, claim 27, which depends from and further limits independent claim 26, is also patentable over the combination of Nazarathy and Tsao for at least the reasons set forth above with respect to independent claim 26, and further in view of its own respective features.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection, and find claims 26-27 allowable over the applied references.

Claims 28-33

Claims 28-33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nazarathy in view of Tsao and further in view of U.S. Patent No.6,108,307 to McConnell *et al.* ("McConnell"). Applicants respectfully traverse.

Claims 28-33, all of which depend from and further limit independent claim 26, are also patentable over the combination of Nazarathy, Tsao, and McConnell for at least the reasons set forth above with respect to independent claim 26, and further in view of their own respective features. Moreover, McConnell is not used by the Examiner to show, and it does not teach or suggest the "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator and wherein said detecting occurs at the physical interface prior to data link layer protocol processing" feature of claim 26, but rather teaches a conflicting priority queuing

approach. Specifically, McConnell determines priority levels for packets based on the network connection (McConnell Abstract).

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection, and find claims 28-33 allowable over the applied references.

Claims 1-25:

The Examiner notes that claims 1-25 are method claims corresponding to system claims 26-33. The Examiner indicates that claims 1-25 are analyzed and rejected as previously discussed with respect to claims 26-33. Applicants respectfully traverse.

Independent claim 1 includes an element of "detecting an identifier from the burst at the physical interface, wherein said detecting occurs prior to data link layer protocol processing." Independent claim 19 includes an element of "matching said identifier to a priority indicator, said matching being implemented at the physical interface prior to data link layer protocol processing the burst." Independent claim 20 includes an element of "processing the plurality of bursts at the physical interface to detect an identifier from each burst, wherein said processing the plurality of bursts at the physical interface occurs prior to data link layer protocol processing." The arguments presented above relative to the "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator and wherein said detecting occurs at the physical interface prior to data link layer protocol processing" feature of claim 26 apply to each of these elements. Thus, for at least the reasons described above with respect to claim 26, claims 1, 19 and 20 are allowable over the

combination of Nazarathy, Tsao, and McConnell. Reconsideration and allowance of claims 1, 19, and 20 is respectfully requested.

Further, claims 2-18, all of which depend from and further limit independent claim 1, are also patentable over the combination of Nazarathy, Tsao, and McConnell for at least the reasons set forth above with respect to independent claim 1, and further in view of their own respective features.

Furthermore, claims 21-25, all of which depend from and further limit independent claim 20, are also patentable over the combination of Nazarathy, Tsao, and McConnell for at least the reasons set forth above with respect to independent claim 20, and further in view of their own respective features.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection, and find claims 1-25 allowable over the applied references.

New Claims

New claims 34-38 are sought to be added. Claims 34, 35, and 36-38 depend from independent claims 19, 20, and 26, respectively, and should be found allowable for at least the reasons discussed above. Support for claims 34-36 can be found throughout the Specification, for example, paragraph 0055 of the instant application. Support for claims 37-38 can be found throughout the Specification, for example, paragraph 0046 of the instant application.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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